



## SEQUENCE LISTING

<110> Ono Pharmaceutical Co., Ltd.

<120> A NOVEL POLYPEPTIDE, A CDNA ENCODING THE POLYPEPTIDE AND UTILIZATION THEREOF

<130> Q61536

<140> 09/674,330

<141> 2000-10-30

<150> JP 10-119731

<151> 1998-04-28

<150> PCT/JP99/02283

<151> 1999-04-28

<160> 12

<170> PatentIn version 3.0

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<213> Mus musculus

<220>

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<223> Clone mouse A55 derived from Day 13 mouse embryonic heart

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Gly Tyr Leu Cys Ile Pro Arg Thr Asn Pro Val Tyr Arg Gly Pro Tyr  
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Ser Asn Pro Tyr Ser Thr Ser Tyr Ser Gly Pro Tyr Pro Ala Ala Ala  
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Pro Pro Val Pro Ala Ser Asn Tyr Pro Thr Ile Ser Arg Pro Leu Val  
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190 195 200

Tyr Gly Ser Phe Ile Cys Arg Cys Asp Pro Gly Tyr Glu Leu Glu Glu  
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Cys Tyr Asn Leu Gln Gly Gly Phe Lys Cys Ile Asp Pro Ile Ser Cys  
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Gln Ala Thr Thr Arg Tyr Pro Gly Ala Tyr Tyr Ile Phe Gln Ile Lys  
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Ser Ala Thr Leu Val Met Thr Arg Pro Ile Lys Gly Pro Arg Asp Ile  
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Gly Asn Gln Cys Val Asp Val Asp Glu Cys Ala Thr Asp Ser His Gln  
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Cys Asn Pro Thr Gln Ile Cys Ile Asn Thr Glu Gly Tyr Thr Cys  
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Gly Ser Tyr Ser Cys Thr Cys Asn Pro Gly Phe Thr Leu Asn Asp Asp  
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Pro Gly Tyr Glu Leu Glu Asp Gly Ile His Cys Ser Asp Met Asp  
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Tyr Tyr Ile Phe Gln Ile Lys Ser Gly Asn Glu Gly Arg Glu Phe Tyr  
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	Gln Met Asp Glu Gly Asn Gln Cys Val Asp Val Asp Glu Cys Ala Thr					
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	Gly Tyr Thr Cys Ser Cys Thr Asp Gly Tyr Trp Leu Leu Glu Gly Gln					
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	tgc cta gat att gat gaa tgt cgc tat ggt tac tgc cag cag ctc tgt					813
	Cys Leu Asp Ile Asp Glu Cys Arg Tyr Gly Tyr Cys Gln Gln Leu Cys					
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	gca aat gtt cca gga tcc tat tcc tgt aca tgc aac cct ggt ttc acc					861
	Ala Asn Val Pro Gly Ser Tyr Ser Cys Thr Cys Asn Pro Gly Phe Thr					
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cac	cga	aac	cac	acg	tgt	acc	tca	ctg	cag	act	tgc	tac	aat	cta	caa	1197		
His	Arg	Asn	His	Thr	Cys	Thr	Ser	Leu	Gln	Thr	Cys	Tyr	Asn	Leu	Gln			
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Arg	Asp	Gln	Pro	Phe	Thr	Ile	Leu	Tyr	Arg	Asp	Met	Asp	Val	Val	Ser			
320					325					330								
gga	cgc	tcc	gtt	cct	gct	gac	atc	ttc	cag	atg	caa	gca	aca	acc	cga	1389		
Gly	Arg	Ser	Val	Pro	Ala	Asp	Ile	Phe	Gln	Met	Gln	Ala	Thr	Thr	Arg			
335					340					345					350			
tac	cct	ggt	gcc	tat	tac	att	ttc	cag	atc	aaa	tct	ggc	aac	gag	ggt	1437		
Tyr	Pro	Gly	Ala	Tyr	Tyr	Ile	Phe	Gln	Ile	Lys	Ser	Gly	Asn	Glu	Gly			
				355					360					365				
cga	gag	ttc	tat	atg	cgg	caa	aca	ggg	cct	atc	agt	gcc	acc	ctg	gtg	1485		
Arg	Glu	Phe	Tyr	Met	Arg	Gln	Thr	Gly	Pro	Ile	Ser	Ala	Thr	Leu	Val			
			370					375					380					
atg	aca	cgc	ccc	atc	aaa	ggg	cct	cgg	gac	atc	cag	ctg	gac	ttg	gag	1533		
Met	Thr	Arg	Pro	Ile	Lys	Gly	Pro	Arg	Asp	Ile	Gln	Leu	Asp	Leu	Glu			
385						390					395							
atg	atc	act	gtc	aac	act	gtc	atc	aac	ttc	aga	ggc	agc	tcc	gtg	atc	1581		
Met	Ile	Thr	Val	Asn	Thr	Val	Ile	Asn	Phe	Arg	Gly	Ser	Ser	Val	Ile			
400					405						410							

cga ctg cgg ata tat gtg tgg cag tat ccg ttc tgagcctctg gctaaggcct 1634  
 Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe  
 415 420 425

ctgacactgc ctttcaccag caccgagggg cgggaggaga aaggaaacca gcaagaatga 1694  
 gagcgagaca gacattgcac ctttctgtct gaatatctcc tggggggcatc agcctagcat 1754  
 cttgacccat atctgtacta ttgcagatgg tcaactctgaa ggacaccctg ccctcagttc 1814  
 ctatgatgca gttatccaaa agtggttcac ttagcccctg atatgagggt gccagtgact 1874  
 cttcaaagcc ttccatttat ttccatcggt ttataaaaaa gaaaatagat tagatttgct 1934  
 ggggtatgag tctcgaagg ttcaaaagac tgagtggctt gctctcacct cttcctctcc 1994  
 ttctccatc tcttgctgca ttgctgcttt gcaaaagtcc tcatgggctc gtgggaaatg 2054  
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 gaaattttag ttgtctttta aatttgatg agtgtttaac cttttcttat tcattttgag 2234  
 gcttcttaaa gtggtagaat tctttccaaa ggctcagat acatgttatg ttcagtcttt 2294  
 ccaacctcat cctttcctgc atcttagccc agtttttacg aagaccctt aatcatgctt 2354  
 tnttaagagt ttttacccaa ctgcgttgga agacagaggt atccagactg attaaataat 2414  
 tgaagaaaaa aaaaa 2429

<210> 8  
 <211> 461  
 <212> PRT  
 <213> Mus musculus

<220>  
 <221> misc\_feature  
 <223> Clone mouse A55b derived from Day 13 mouse embryonic heart

<400> 8

Met Gly Pro Arg Ser Phe Glu Pro Met His Ser Gly Leu Cys Arg Gln  
 -35 -30 -25

Arg Arg Met Ile Leu Thr Val Thr Ile Leu Ala Leu Trp Leu Pro His  
 -20 -15 -10 -5

Pro Gly Asn Ala Gln Gln Gln Cys Thr Asn Gly Phe Asp Leu Asp Arg  
 -1 1 5 10

Gln Ser Gly Gln Cys Leu Asp Ile Asp Glu Cys Arg Thr Ile Pro Glu  
15 20 25

Ala Cys Arg Gly Asp Met Met Cys Val Asn Gln Asn Gly Gly Tyr Leu  
30 35 40

Cys Ile Pro Arg Thr Asn Pro Val Tyr Arg Gly Pro Tyr Ser Asn Pro  
45 50 55 60

Tyr Ser Thr Ser Tyr Ser Gly Pro Tyr Pro Ala Ala Ala Pro Pro Val  
65 70 75

Pro Ala Ser Asn Tyr Pro Thr Ile Ser Arg Pro Leu Val Cys Arg Phe  
80 85 90

Gly Tyr Gln Met Asp Glu Gly Asn Gln Cys Val Asp Val Asp Glu Cys  
95 100 105

Ala Thr Asp Ser His Gln Cys Asn Pro Thr Gln Ile Cys Ile Asn Thr  
110 115 120

Glu Gly Gly Tyr Thr Cys Ser Cys Thr Asp Gly Tyr Trp Leu Leu Glu  
125 130 135 140

Gly Gln Cys Leu Asp Ile Asp Glu Cys Arg Tyr Gly Tyr Cys Gln Gln  
145 150 155

Leu Cys Ala Asn Val Pro Gly Ser Tyr Ser Cys Thr Cys Asn Pro Gly  
160 165 170

Phe Thr Leu Asn Asp Asp Gly Arg Ser Cys Gln Asp Val Asn Glu Cys  
175 180 185

Glu Thr Glu Asn Pro Cys Val Gln Thr Cys Val Asn Thr Tyr Gly Ser  
190 195 200

Phe Ile Cys Arg Cys Asp Pro Gly Tyr Glu Leu Glu Glu Asp Gly Ile  
205 210 215 220

His Cys Ser Asp Met Asp Glu Cys Ser Phe Ser Glu Phe Leu Cys Gln  
225 230 235

His Glu Cys Val Asn Gln Pro Gly Ser Tyr Phe Cys Ser Cys Pro Pro  
240 245 250

Gly Tyr Val Leu Leu Asp Asp Asn Arg Ser Cys Gln Asp Ile Asn Glu  
255 260 265

Cys Glu His Arg Asn His Thr Cys Thr Ser Leu Gln Thr Cys Tyr Asn  
270 275 280

Leu Gln Gly Gly Phe Lys Cys Ile Asp Pro Ile Ser Cys Glu Glu Pro  
285 290 295 300

Tyr Leu Leu Ile Gly Glu Asn Arg Cys Met Cys Pro Ala Glu His Thr  
305 310 315

Ser Cys Arg Asp Gln Pro Phe Thr Ile Leu Tyr Arg Asp Met Asp Val  
320 325 330

Val Ser Gly Arg Ser Val Pro Ala Asp Ile Phe Gln Met Gln Ala Thr  
335 340 345

Thr Arg Tyr Pro Gly Ala Tyr Tyr Ile Phe Gln Ile Lys Ser Gly Asn  
350 355 360

Glu Gly Arg Glu Phe Tyr Met Arg Gln Thr Gly Pro Ile Ser Ala Thr  
365 370 375 380

Leu Val Met Thr Arg Pro Ile Lys Gly Pro Arg Asp Ile Gln Leu Asp  
385 390 395

Leu Glu Met Ile Thr Val Asn Thr Val Ile Asn Phe Arg Gly Ser Ser  
400 405 410

Val Ile Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe  
415 420 425

<210> 9  
<211> 423  
<212> PRT  
<213> Mus musculus



<400> 9

Gln Cys Thr Asn Gly Phe Asp Leu Asp Arg Gln Ser Gly Gln Cys Leu  
1 5 10 15  
Asp Ile Asp Glu Cys Arg Thr Ile Pro Glu Ala Cys Arg Gly Asp Met  
20 25 30  
Met Cys Val Asn Gln Asn Gly Gly Tyr Leu Cys Ile Pro Arg Thr Asn  
35 40 45  
Pro Val Tyr Arg Gly Pro Tyr Ser Asn Pro Tyr Ser Thr Ser Tyr Ser  
50 55 60  
Gly Pro Tyr Pro Ala Ala Ala Pro Pro Val Pro Ala Ser Asn Tyr Pro  
65 70 75 80  
Thr Ile Ser Arg Pro Leu Val Cys Arg Phe Gly Tyr Gln Met Asp Glu  
85 90 95  
Gly Asn Gln Cys Val Asp Val Asp Glu Cys Ala Thr Asp Ser His Gln  
100 105 110  
Cys Asn Pro Thr Gln Ile Cys Ile Asn Thr Glu Gly Gly Tyr Thr Cys  
115 120 125  
Ser Cys Thr Asp Gly Tyr Trp Leu Leu Glu Gly Gln Cys Leu Asp Ile  
130 135 140  
Asp Glu Cys Arg Tyr Gly Tyr Cys Gln Gln Leu Cys Ala Asn Val Pro  
145 150 155 160  
Gly Ser Tyr Ser Cys Thr Cys Asn Pro Gly Phe Thr Leu Asn Asp Asp  
165 170 175  
Gly Arg Ser Cys Gln Asp Val Asn Glu Cys Glu Thr Glu Asn Pro Cys  
180 185 190  
Val Gln Thr Cys Val Asn Thr Tyr Gly Ser Phe Ile Cys Arg Cys Asp  
195 200 205  
Pro Gly Tyr Glu Leu Glu Glu Asp Gly Ile His Cys Ser Asp Met Asp  
210 215 220  
Glu Cys Ser Phe Ser Glu Phe Leu Cys Gln His Glu Cys Val Asn Gln  
225 230 235 240  
Pro Gly Ser Tyr Phe Cys Ser Cys Pro Pro Gly Tyr Val Leu Leu Asp  
245 250 255  
Asp Asn Arg Ser Cys Gln Asp Ile Asn Glu Cys Glu His Arg Asn His  
260 265 270  
Thr Cys Thr Ser Leu Gln Thr Cys Tyr Asn Leu Gln Gly Gly Phe Lys  
275 280 285

Cys Ile Asp Pro Ile Ser Cys Glu Glu Pro Tyr Leu Leu Ile Gly Glu  
290 295 300

Asn Arg Cys Met Cys Pro Ala Glu His Thr Ser Cys Arg Asp Gln Pro  
305 310 315 320

Phe Thr Ile Leu Tyr Arg Asp Met Asp Val Val Ser Gly Arg Ser Val  
325 330 335

Pro Ala Asp Ile Phe Gln Met Gln Ala Thr Thr Arg Tyr Pro Gly Ala  
340 345 350

Tyr Tyr Ile Phe Gln Ile Lys Ser Gly Asn Glu Gly Arg Glu Phe Tyr  
355 360 365

Met Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val Met Thr Arg Pro  
370 375 380

Ile Lys Gly Pro Arg Asp Ile Gln Leu Asp Leu Glu Met Ile Thr Val  
385 390 395 400

Asn Thr Val Ile Asn Phe Arg Gly Ser Ser Val Ile Arg Leu Arg Ile  
405 410 415

Tyr Val Ser Gln Tyr Pro Phe  
420

<210> 10

<211> 1269

<212> DNA

<213> Mus musculus

<400> 10

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tgccggacca tccctgaggc ttgtcgtggg gacatgatgt gtgtcaacca gaatggcggg 120  
tatttgtgca tccctcgaac caaccagtg tatcgagggc cttactcaaa tccctactct 180  
acatcctact caggcccata cccagcagcg gcccaccag taccagcttc caactacccc 240  
acgatttcaa ggcctcttgt ctgccgcttt gggatcaga tggatgaagg caaccagtgt 300  
gtggatgtgg acgagtgtgc aacagactca caccagtgc accctacca gatctgtatc 360  
aacactgaag gaggttacac ctgctcctgc accgatgggt actggcttct ggaagggcag 420  
tgccatgata ttgatgaatg tcgctatggt tactgccagc agctctgtgc aaatgttcca 480  
ggatcctatt cctgtacatg caaccctggg ttcaccctca acgacgatgg aaggtcttgc 540  
caagatgtga acgagtgcga aactgagaat cctgtgttcc agacctgtgt caacacctat 600  
ggctctttca tctgccgctg tgaccagga tatgaacttg aggaagatgg cattcactgc 660

agtgatatgg acgagtgcag cttctccgag ttcctctgtc aacacgagtg tgtgaaccag	720
ccgggctcat acttetgtct gtgccctcca ggctacgtcc tgttgatga taaccgaagc	780
tgccaggata tcaatgaatg tgagcaccga aaccacacgt gtacctact gcagacttgc	840
tacaatctac aagggggctt caaatgtatt gatcccatca gctgtgagga gccttatctg	900
ctgattggtg aaaaccgctg tatgtgtcct gctgagcaca ccagctgcag agaccagcca	960
ttcaccatcc tgtatcggga catggatgtg gtgtcaggac gctccgttcc tgctgacatc	1020
ttccagatgc aagcaacaac ccgataccct ggtgcctatt acattttcca gatcaaatct	1080
ggcaacgagg gtcgagagtt ctatatgcgg caaacagggc ctatcagtgc caccctggtg	1140
atgacacgcc ccatcaaagg gcctcgggac atccagctgg acttgagat gatcactgtc	1200
aacactgtca tcaacttcag aggcagctcc gtgatccgac tgcggatata tgtgtcgcag	1260
tatccgttc	1269

<210> 11  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<220>  
 <221> misc\_feature  
 <223> "n" may be a, c, g or t

<400> 11	
cgattgaatt ctagacctgc ctcgagnnnn nnnnn	35

<210> 12  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: A55 R1 Primer

<400> 12	
cgtttgtgca ctgctgctgt gcattcc	27